

Chula Vista Climate Change Impacts & Adaptation Options

ENERGY

Draft Updated: 2/3/2010

CLIMATE CHANGES	IMPACT TO SAN DIEGO REGION	HOW IS CHULA VISTA VULNERABLE TO IMPACTS? (pressure on economy, physical infrastructure, society, environment, & other systems)	ADAPTATION OPTIONS (potential responses to manage vulnerabilities)	Source of Adaptation Option
Warmer temperatures	Average annual temperatures 1.5-4.5° F hotter, additional summertime warming	A Higher peak demand and transmission inefficiencies in summertime (when cooling needs are greatest) make stable and adequate supplies increasingly challenging		
			1 Adopt a building energy rating and disclosure program	Austin California Montgomery County
			2 Require LEED or equivalent standards for residential, commercial, industrial projects to increase energy efficiency	Chula Vista Santa Monica Boston
			3 Promote on-site generation or energy storage (including thermal) to offset peak energy needs	Redding CV Nature Center
			4 Establish a building retrofit program to reduce energy consumption during periods of peak demand	Chula Vista Babylon (NY) Seattle
			6 Implement time-of-use or peak demand energy pricing (SDG&E already does for commercial and industrial customers)	SDG&E Port Angeles
			7 Enroll all municipal facilities in demand response programs (if applicable)	Chicago SDG&E
			8 Identify emergency centers as priorities for onsite renewable energy sources to reduce susceptibility to lapses in the conventional energy supply	Keene Chicago
			9 Update emergency response plans to account for increased potential for black outs in summertime	Davis Novi
		B Increasingly expensive energy costs expose vulnerable populations (such as low income families) to expend higher proportion of income on energy		
			10 Develop outreach and incentives appropriate for energy efficiency/renewable energy upgrades in the rental market where there are split incentives for property-owner and electricity rate payer (renter)	Boulder Memphis
			11 Target outreach of existing efficiency upgrade programs and incentives to low-income neighborhoods and small businesses	Climate Gap Report SDG&E
			12 Target urban heat island mitigation programs in low-income neighborhoods, who have proportionately harder time cooling homes	Chicago
		D Higher cooling demand in urban areas due to higher temperatures ("Urban Heat Island Effect")		
			13 Require or provide incentives for new development with air-conditioning systems to install ENERGY STAR cool roof technology	Florida
			14 Establish a green roof/wall grant or incentive program	Chicago Cincinnati Houston
			15 Develop an outreach program to engage residents to install cool roof technologies	New York Portland Sacramento
			16 Incorporate cool paving technologies into maintenance of existing municipal streets and properties	Chicago Houston Clean Air Partner
			17 Ordinance to require new parking lots to incorporate shade trees and permeable, reflective pavements	Davis Sacramento Austin
			18 Develop incentives or financing mechanisms to expand urban forests on public & private properties	EPA Los Angeles Tucson

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			19 Give preference to canopy forming trees into all municipal street & landscape projects	Austin
Declining snowpack & more variable precipitation	Lower hydropower available to the region (current 10% of SDG&E mix)	E Increasing pressure to diversify local supplies and renewable sources of energy		
			20 Require or provide incentives for new construction to pre-wire for solar PV installation, or pre-plumb for solar water heating installation	Chula Vista Palm Desert
			21 Establish financing programs that residents and business can access to install distributed energy systems as well as conduct energy assessments and make energy efficiency retrofits to existing buildings	Chula Vista Berkeley California
			22 Provide incentives for distributed generation such as combined heat & power systems in the City	Palo Alto SANDAG
			23 Through City planning process, seek options for district heating and cooling systems in new development projects	Chula Vista
			24 Investigate potential for small hydropower generation from water distribution system	NY Power Authority Carlsbad
			25 Waive or cap fees associated with installing solar power for limited period	Chula Vista Santa Ana Los Alamitos
			26 Participate as a local government in EPA's Green Power Partnership Program, and promote program to local organizations	EPA San Diego Houston
			27 Incorporate passive solar, geothermal heat pumps, and micro wind into residential and commercial development and zoning codes	Keene Park City Stockton

Sources for Listed Local Impacts and Corresponding Vulnerabilities

A	Focus 2050 Study Technical Assessment, page 34-35 (2008).
	California Adaptation Strategy, p128 (2009).
B	Public Policy Institute of California. "Adaptation of California's Electricity Sector to Climate Change." p3 (2008).
D	California Adaptation Strategy, p32-41 (2009).
E	Focus 2050 Study Technical Assessment, page 43 (2008).
	California Adaptation Strategy, p125-128 (2009).
F	California Adaptation Strategy, p126 (2009).
G	Public Policy Institute of California. "Adaptation of California's Electricity Sector to Climate Change." p10 (2008).